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**REMARKS**

Claim 28 is pending in this application. As to the amendments to Claim 28, see Applicants' specification, e.g., at page 1, lines 13-14; page 5, line 9+; page 7, line 5+; page 8, lines 19+; page 11, line 17+; page 12, line 2+, line 7+; page 13, line 9+; page 13, line 24+; page 14, line 7+; page 14, line 22; page 27, line 9+. Claim 28 before amendment was not believed to be close to the Vardi reference which the Examiner has cited as the closest prior art, and the claim amendments are to advance and simplify prosecution in this application and not due to the prior art of record.

Claim 28 has been rejected under 35 U.S.C. 112, second paragraph as being indefinite. The Examiner alleges that Claim 28 is incomplete for omitting essential steps, citing MPEP 2172.01, and alleging that there are omitted steps between D) and E), and E) and F). The Examiner's position is that it is unclear as to how, after defining criteria for selection, characterizing the workforce evolution and identifying feasibility of target steps will generate an achievable state of the workforce. The Examiner's position is that "[t]he steps have no sequence or continuity between them" and "appear to be different pieces for designing and planning a workforce evolution." (Office action, page 3.)

Applicants respond as follows. To advance prosecution, Claim 28 has been amended above and this ground of rejection is believed to be obviated.

Claim 28 has been rejected under 35 U.S.C. 101.

Applicants respond as follows. To advance prosecution, Claim 28 has been amended above (see especially lines 4-5), and this ground of rejection is believed to be obviated.

Claim 28 again has been rejected under 35 U.S.C. 103(a) as being unpatentable over Vardi (1980) in view of Habichler further both in view of Clark and Kintner. The Examiner identifies many deficiencies in Vardi at pages 10-14 of the office, and resorts to three additional references.

Applicants respectfully traverse this obviousness rejection.

The primary reference, Vardi, is very removed from Applicants' Claim 28. Firstly, Vardi fails to teach or disclose "A computer implemented method for management of workforce evolution of a workforce of a business" as recited in the preamble of Applicants' Claim 28.

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Vardi's focus is on an individual's changing career, rather than on change in a business' entire workforce. Vardi, not being focused on the workforce, further omits to teach how to manage the workforce. To the contrary, Vardi's 1980 work was about understanding an individual employee's movement.

Also, Vardi fails to teach "providing a system solution architecture comprising several layers separated by databases and computational and execution functions" as set forth in Applicants' Claim 28. Rather, Vardi's disclosure is generalized and does not call for use of a computer.

Vardi fails to teach or disclose "a workforce evolution network" that is implemented in databases and computational and execution functions of a system solution architecture as in Applicants' Claim 28.

Vardi fails to teach or disclose making at least a first skill level/job group, a second skill level/job group, and a set of links (a new hire link, a resignation link, etc.) therebetween into a computer-based model manipulable by computer, for any purpose, not even to manage an individual's career much less to manage the entire workforce.

Vardi fails to teach or disclose keeping track of how many employees are in each skill level/job group at a given specified time as in Applicants' Claim 28 at paragraph 1(b). Nor does Vardi disclose expressing that information as a vector, and using that vector in any computer-based, computer-manipulable model much less one relating to an entire workforce.

Also, Vardi fails to teach or disclose keeping track of a set of time periods as recited in Applicants' Claim 28 at paragraph 1( c), and the manipulating that data via computer.

Further, Vardi fails to teach or disclose defining "a workforce evolution rate" and associating that information with a (link, time period) pair as in Applicants' Claim 28 at paragraph 1(d), much less manipulating that data via computer. Likewise, Vardi is deficient and lacks teaching of "controlled evolution rates" recited in Applicants' Claim 28, at paragraph 1(e).

Vardi completely lacks any teaching or disclosure about cost. Vardi utterly fails to teach or disclose "a cost function representing one or more numerical values associated with maintaining the workforce evolution network in a particular state at a particular time" as in Applicants' Claim 28, paragraph 1(f).

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Also, Vardi completely lacks any disclosure of “a penalty function representing one or more numerical values associated with maintaining the workforce evolution network in a particular state at a particular time, wherein the penalty function models lost revenue/profit due” or “value function” or “a reward function”.

Vardi has no disclosure, even in a non-computerized way, of these many aspects of workforce evolution and management of workforce evolution in Applicants’ Claim 28, paragraph (1). A person of ordinary skill in Applicants’ art simply does not see in Vardi information for dealing with the workforce as a whole, but rather, regards Vardi as teaching about how to deal with career mobility of an individual, such as what the organization might say to a new hire or a prospect about his career path in the organization.

Moreover, Vardi has no disclosure “adding or destroying one or more skill level/job groups or one or more links and computing, via the system solution architecture, ... the cost of changing the workforce evolution network topology...” as in Applicants’ Claim 28, at paragraph (2). Vardi (1980) does not disclose anything remotely close, even in a non-computerized way. Vardi seem s not to even address whether the set of positions that make up the organizational chart of a business can itself change over time, irrespective of what individual occupies each position in the organizational chart.

The Vardi and Habichler references<sup>1</sup> are only about one individual, unlike Applicants’ Claim 28 which is about the organization’s workforce as a whole. Moreover, Vardi and Habichler are further limited by not dealing with dynamism of an org chart of the organization, while Applicants’ Claim 28 deals with an organization with an org chart that can be dynamic. Also, the Vardi and Habichler work completely omits to deal with cost to the business, while Applicants’ Claim 28 deals with cost to the business.

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<sup>1</sup>When the Examiner resorts to the secondary reference, Habichler, titled “Managing future career paths,” again, the perspective of Habichler, like Vardi’s, is an individual’s career, not a workforce’s evolution. Referring to Habichler’s Figs. 5A-5B, 7A-7D, 8D, see that the screens are expressed for use by the employee such as in terms of “My Current Work Position”, “My Current Skills”, “My Recommended Learning”, etc. Also, Habichler, like Vardi, takes no account at all of cost to the employer.

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Vardi/Hablicher	Applicants' Claim 28
Does not deal with cost to the organization	Deals with cost to the organization
Does not deal with cost of the whole workforce	Deals with cost to the organization for the whole workforce
Deals with how over time, one individual moves within an organization	Deals with how, over time, many individuals move within the organization
Does not address the situation for the organization if another individual moves into the organization	Addresses individuals moving into the organization
Does not address the situation for the organization if, over time, the individual under study or anyone else exits the organization	Addresses individuals exiting the organization
Does not address whether the job groups within the organization change – the organization has a static org chart	Addresses added or removed job groups within the organization change – the organization has a dynamic org chart
What the workforce costs the organization is not addressed	What the workforce costs the organization is addressed

A person of ordinary skill in the art at the time of Applicant's invention would have no reason, if he wanted to manage workforce evolution, to try to begin with the Vardi/Habichler references to come up with a workforce evolution method. Rather, the objectively more reasonable approach would have been that he or she would have started with existing work regarding workforce management such as Kintner (to GMC) titled "Method of determining the best mix of regular and contract employees." It is objectively unrealistic to hypothesize that a person of ordinary skill in Applicants' art would start with a non-computer model in Vardi that was not even concerned with cost to the business or the workforce as a whole; the much more logical starting point was Kintner which clearly addresses cost from the employer's perspective

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and is a computer-based approach. Nor can Clark supply the huge deficiencies, dealing only with an automated system for matching job candidates with jobs.

The Examiner's theory of how a person of ordinary skill in the art reads the four references and combines and manipulates them simply is not fairly attributable to such a person as his actual thought process. Even with the four references, there is no way reasonably attributed to him that he manipulates the four references into arriving at Applicants' Claim 28. The Examiner is reminded that the person of ordinary skill in the art at the time of Applicants' invention does not already know the Applicants' Claim 28, so we have to consider how that person is thinking, back then, when he just has the four references plus the knowledge and experience that are expected of that person. Back at that point in time, if the person of ordinary skill in the art has received an assignment from his boss to create a computer-based workforce management system, out of the four references, he would not even logically start with Vardi because it is not the closest of the four references to his assignment. If he were to go to a meeting with his boss, bringing the Vardi reference and the other three references, and report that he thinks Vardi is the starting point for beginning to make the workforce management system, the boss would say that Vardi is not workforce management, do not waste your time starting with Vardi. But if the person of ordinary skill in the art were to go to the meeting with his boss, and report that he thinks Kintner is the starting point for beginning to make the workforce management system, the boss would at least agree that was workforce management.

We urge the Examiner to sit down with the four references and pretend that it is the time of Applicants' invention and that the Examiner has never seen Applicants' specification or Applicants' Claim 28. In such a frame of mind, wouldn't the person of ordinary skill in the art who is tasked with building a computer-based workforce management system actually be off-task if he started with a decades-old sociology-oriented paper about individual career mobility? Wouldn't it, objectively speaking, make more sense for him to have a starting focus on Kintner and Kintner's computer-based system?

In any event, the four references simply do not combine themselves in the mind of a person of ordinary skill in the art at the time of Applicants' invention, for him to be able to arrive at Applicants' Claim 28. Whatever he gets from the four references, it is not fair to say that it is

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Applicants' Claim 28, because there is just too much road to travel between any one of the four references and when we read each of the other three references in the perspective of a person of ordinary skill in the art at the time of Applicants' invention, there is still a huge gap between on the one hand, what is in the mind of a person of ordinary skill in the art reading all four of the references, and on the other hand, Applicants' Claim 28. Applicants' Claim 28 is unattainable for him, despite having all four references, no matter how he thinks about the four references.

Reconsideration and withdrawal of the obviousness rejection are sought.

In view of the foregoing, it is requested that the application be reconsidered, that claim 28 be allowed, and that the application be passed to issue.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at 703-787-9400 to discuss any other changes deemed necessary in a telephonic or personal interview.

If an extension of time is required for this response to be considered as being timely filed, a conditional petition is hereby made for such extension of time. Please charge any deficiencies in fees and credit any overpayment of fees to Deposit Account 50-0510 (IBM-Yorktown).

Respectfully submitted,

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